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## *Women's Health*

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*Definition: Female respondents who answered “no” to the question “Are you aware that cervical cancer is caused by Human Papiloma Virus also known as HPV?”*

### **Knowledge of HPV and Cervical Cancer**

- South Dakota females 15.6%
- There is no nationwide median for knowledge of the HPV and cervical cancer connection.

### **Healthy People 2010 Objective**

*There was no stated Healthy People 2010 Objective for knowledge of the HPV and cervical cancer connection.*

### **Trend Analysis**

This was the first year this question was asked, so no trend analysis could be done.

### **Demographics**

<b>Age</b>	The lack of knowledge about HPV and cervical cancer increases as age increases. This includes significant increases as the 55-64 and 75 and older age groups are reached.
<b>Race</b>	American Indians demonstrate a significantly higher prevalence of not being aware that cervical cancer is caused by HPV than do whites.
<b>Region</b>	The northeast, central, and American Indian counties regions show a very high prevalence of not knowing about the connection between HPV and cervical cancer, while the southeast region exhibits a very low prevalence.
<b>Household Income</b>	The prevalence of not being aware of this connection is much lower in higher household income groups.
<b>Education</b>	The prevalence of not being aware of this connection decreases as education increases. This includes significant decreases as the some high school, some post-high school, and college graduate levels are reached.
<b>Employment Status</b>	Those who are a homemaker, retired, or unable to work exhibit a very high prevalence of not knowing that cervical cancer is caused by HPV, while those who are employed for wages or self-employed show very low prevalence.
<b>Marital Status</b>	Those who are widowed exhibit a very high prevalence of not being aware of this connection, while those who have never been married show a very low prevalence.

**Table 53**  
**Female Respondents Who Are Not Aware That Cervical Cancer is Caused by Human Papilloma Virus, 2007**

	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
<b>Total</b>	<b>3,817</b>	<b>15.6</b>	<b>(14.3-17.0)</b>	-	-	-	<b>3,817</b>	<b>15.6</b>	<b>(14.3-17.0)</b>
<b>Age</b>									
18-24	112	5.5	(2.7-10.8)	-	-	-	112	5.5	(2.7-10.8)
25-34	436	6.9	(4.8-9.7)	-	-	-	436	6.9	(4.8-9.7)
35-44	475	12.0	(9.0-15.9)	-	-	-	475	12.0	(9.0-15.9)
45-54	786	13.1	(10.7-16.0)	-	-	-	786	13.1	(10.7-16.0)
55-64	742	19.3	(16.3-22.8)	-	-	-	742	19.3	(16.3-22.8)
65-74	598	23.6	(19.8-27.9)	-	-	-	598	23.6	(19.8-27.9)
75+	619	37.9	(33.6-42.3)	-	-	-	619	37.9	(33.6-42.3)
<b>Race</b>									
White	3,352	14.9	(13.6-16.3)	-	-	-	3,352	14.9	(13.6-16.3)
American Indian	333	23.9	(18.1-30.9)	-	-	-	333	23.9	(18.1-30.9)
<b>Region</b>									
Southeast	832	11.4	(9.4-13.8)	-	-	-	832	11.4	(9.4-13.8)
Northeast	810	19.9	(17.1-22.9)	-	-	-	810	19.9	(17.1-22.9)
Central	802	20.7	(17.4-24.4)	-	-	-	802	20.7	(17.4-24.4)
West	888	14.8	(12.2-17.9)	-	-	-	888	14.8	(12.2-17.9)
American Indian Counties	485	21.7	(17.0-27.1)	-	-	-	485	21.7	(17.0-27.1)
<b>Household Income</b>									
Less than \$10,000	198	22.4	(14.5-32.9)	-	-	-	198	22.4	(14.5-32.9)
\$10,000-\$14,999	228	25.7	(19.2-33.5)	-	-	-	228	25.7	(19.2-33.5)
\$15,000-\$19,999	302	26.1	(19.9-33.4)	-	-	-	302	26.1	(19.9-33.4)
\$20,000-\$24,999	404	19.3	(14.9-24.6)	-	-	-	404	19.3	(14.9-24.6)
\$25,000-\$34,999	472	17.8	(14.1-22.4)	-	-	-	472	17.8	(14.1-22.4)
\$35,000-\$49,999	602	11.5	(8.7-15.0)	-	-	-	602	11.5	(8.7-15.0)
\$50,000-\$74,999	561	8.8	(6.6-11.6)	-	-	-	561	8.8	(6.6-11.6)
\$75,000+	492	7.7	(5.5-10.6)	-	-	-	492	7.7	(5.5-10.6)
<b>Education</b>									
8th Grade or Less	108	51.6	(40.7-62.4)	-	-	-	108	51.6	(40.7-62.4)
Some High School	213	27.5	(20.4-35.9)	-	-	-	213	27.5	(20.4-35.9)
High School or G.E.D.	1,179	21.9	(19.0-25.2)	-	-	-	1,179	21.9	(19.0-25.2)
Some Post-High School	1,176	13.0	(10.9-15.3)	-	-	-	1,176	13.0	(10.9-15.3)
College Graduate	1,133	8.0	(6.5-9.9)	-	-	-	1,133	8.0	(6.5-9.9)
<b>Employment Status</b>									
Employed for Wages	1,826	11.2	(9.6-13.0)	-	-	-	1,826	11.2	(9.6-13.0)
Self-employed	304	16.8	(12.5-22.3)	-	-	-	304	16.8	(12.5-22.3)
Unemployed	*	*	*	-	-	-	*	*	*
Homemaker	397	20.2	(15.8-25.4)	-	-	-	397	20.2	(15.8-25.4)
Retired	954	28.2	(25.1-31.5)	-	-	-	954	28.2	(25.1-31.5)
Unable to Work	186	28.6	(20.2-38.9)	-	-	-	186	28.6	(20.2-38.9)
<b>Marital Status</b>									
Married/Unmarried Couple	2,188	13.9	(12.3-15.7)	-	-	-	2,188	13.9	(12.3-15.7)
Divorced/Separated	504	15.5	(12.1-19.7)	-	-	-	504	15.5	(12.1-19.7)
Widowed	805	36.3	(32.6-40.2)	-	-	-	805	36.3	(32.6-40.2)
Never Married	310	6.8	(4.4-10.2)	-	-	-	310	6.8	(4.4-10.2)

Note: \*Results based on sample sizes less than 100 have been suppressed.

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2007

## **Further Analysis**

Following are data illustrating the percent of female respondents who are not aware that cervical cancer is caused by Human Papiloma Virus (HPV) for various health behaviors and conditions. For example, 27.4 percent of female respondents who have diabetes are not aware that cervical cancer is caused by HPV, while 14.7 percent of female respondents who do not have diabetes are not aware that cervical cancer is caused by HPV.

<b>Table 54</b>			
<b>Knowledge of Cervical Cancer Connection to HPV for Selected Health Behaviors and Conditions, 2007</b>			
<b>Health Behavior or Condition</b>	<b># Respondents</b>	<b>% No Knowledge</b>	<b>95% CI</b>
Obese (BMI = 30.0+)	944	14.4	11.8-17.4
Overweight (BMI = 25.0-29.9)	1,200	17.5	15.1-20.3
Recommended Weight (BMI = 18.5-24.9)	1,353	14.2	12.3-16.5
No Leisure Time Physical Activity	1,019	22.5	19.6-25.8
Leisure Time Physical Activity	2,795	13.4	12.0-15.0
No Moderate Physical Activity	2,058	17.9	16.0-20.0
Moderate Physical Activity	1,570	11.5	9.8-13.5
No Vigorous Physical Activity	3,073	17.1	15.6-18.8
Vigorous Physical Activity	682	9.2	7.1-11.9
Less Than Five Servings of Fruits and Vegetables	2,902	15.7	14.2-17.3
At Least Five Servings of Fruits and Vegetables	912	15.1	12.5-18.1
Current Smoker	736	15.9	12.9-19.4
Former Smoker	913	14.0	11.5-16.8
Never Smoked	2,163	16.0	14.3-17.9
Smokeless Tobacco Use	*	*	*
No Smokeless Tobacco Use	3,782	15.6	14.3-17.0
Diabetes	363	27.4	22.0-33.4
No Diabetes	3,454	14.7	13.4-16.2
Hypertension	1,252	22.6	20.0-25.4
No Hypertension	2,560	13.3	11.8-14.9
High Blood Cholesterol	1,248	20.0	17.6-22.6
No High Blood Cholesterol	1,985	13.5	11.9-15.3
No Health Insurance (18-64)	237	19.8	13.8-27.7
Health Insurance (18-64)	2,293	10.6	9.2-12.1
Employer Based Health Insurance Coverage (18-64)	1,525	9.8	8.3-11.6
Private Health Insurance Plan (18-64)	290	12.3	8.3-17.7
Medicare (18-64)	*	*	*
Medicaid or Medical Assistance (18-64)	119	12.5	7.2-20.7
The Military, CHAMPUS, TriCare, or the VA (18-64)	*	*	*
The Indian Health Service (18-64)	150	21.1	14.0-30.6
No Flu Shot (65+)	289	30.7	24.8-37.3
Flu Shot (65+)	924	31.4	28.0-35.0
No Pneumonia Shot (65+)	412	32.7	27.6-38.2
Pneumonia Shot (65+)	758	29.6	25.9-33.5
Doesn't Use Sun Block	1,942	15.9	14.1-18.0
Uses Sun Block	1,216	10.3	8.5-12.3
Drank Alcohol in Past 30 Days	1,699	11.4	9.7-13.4
No Alcohol in Past 30 Days	2,104	19.5	17.5-21.6
Binge Drinker	328	10.0	6.9-14.2
Not a Binge Drinker	3,443	16.2	14.8-17.7
Heavy Drinker	102	6.4	3.1-12.6
Not a Heavy Drinker	3,621	15.7	14.3-17.1

**Table 54 (continued)**  
**Knowledge of Cervical Cancer Connection to HPV for Selected Health Behaviors and Conditions, 2007**

<b>Health Behavior or Condition</b>	<b># Respondents</b>	<b>% No Knowledge</b>	<b>95% CI</b>
Previously Had a Heart Attack	176	32.1	23.9-41.5
Never Had a Heart Attack	3,631	15.0	13.6-16.4
Have Angina or Coronary Heart Disease	169	32.7	24.2-42.4
Do Not Have Angina or Coronary Heart Disease	3,605	14.9	13.5-16.3
Previously Had a Stroke	144	22.9	15.6-32.4
Never Had a Stroke	3,671	15.4	14.0-16.8
Current Asthma	319	12.8	9.5-17.1
Former Asthma	111	9.3	5.3-15.9
Never Had Asthma	3,364	16.0	14.6-17.6
Arthritis	1,473	21.9	19.4-24.5
No Arthritis	2,338	12.9	11.4-14.6
Arthritis - Activities Limited	710	22.6	19.0-26.6
No Arthritis - Activities Limited	3,088	14.3	12.9-15.8
Fair or Poor Health Status	634	23.2	19.4-27.6
Excellent, Very Good, or Good Health Status	3,174	14.4	13.0-15.9
Physical Health Not Good for 30 Days of the Past 30	290	22.9	17.3-29.6
Physical Health Not Good for 0-29 Days of the Past 30	3,436	14.7	13.3-16.1
Mental Health Not Good for 20-30 Days of the Past 30	242	20.0	14.2-27.3
Mental Health Not Good for 0-19 Days of the Past 30	3,501	15.0	13.7-16.5
Usual Activities Unattainable for 10-30 Days of the Past 30	288	18.5	13.5-24.9
Usual Activities Unattainable for 0-9 Days of the Past 30	3,491	15.2	13.9-16.6
Dissatisfied / Very Dissatisfied with Life	155	18.9	12.5-27.6
Satisfied / Very Satisfied with Life	3,637	15.3	13.9-16.7
Physical, Mental, or Emotional Disability	931	19.2	16.3-22.4
No Physical, Mental, or Emotional Disability	2,882	14.7	13.2-16.2
Disability with Special Equipment Needed	368	28.6	23.5-34.3
No Disability with Special Equipment Needed	3,448	14.6	13.3-16.1
Two or More Hours of TV Watched Per Day	2,838	15.3	13.9-16.9
Less Than Two Hours of TV Watched Per Day	927	16.0	13.3-19.2
Never Been Tested for HIV (18-64)	1,918	12.9	11.3-14.8
Been Tested for HIV (18-64)	583	6.3	4.4-9.0
Diarrhea in Past 30 Days	585	16.8	13.4-20.9
No Diarrhea in Past 30 Days	3,204	15.3	13.9-16.9
Military Veteran	*	*	*
Not a Military Veteran	3,759	15.5	14.2-17.0

Note: \*Results based on sample sizes less than 100 have been suppressed.

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2007